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AGRICULTURAL EDUCATION IN UGANDA SCHOOLS -
A CASE STUDY

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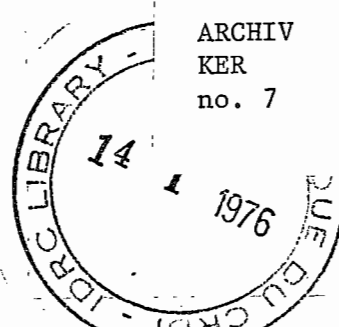
THE COUNTRY AND ITS PROBLEMS

Uganda is a small country situated astride the Equator in East Africa. Although the relatively high altitude above sea level (mainly between 1,000-1,900 metres) modifies the tropical climate, Uganda shows many of the typical features of tropical African countries. The economy is almost entirely based on agriculture, with over 90% of the population of 10 million directly dependent on production from smallholdings. (1)

In common with other African countries, the farming methods used on these smallholdings are still mainly based on the traditional system of shifting cultivation using the hand-hoe, with modifications particularly in areas where perennial crops such as bananas and coffee are grown. (2)

The 1969 census showed that Uganda's rate of population

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increase of 3.8% per year is one of the highest in the world, (3) and although the country still has unoccupied areas of fertile land, it has been estimated that most of this land will be settled by 1990 or before. (4) Parts of the country are already showing signs of population pressure, including declining soil fertility, erosion, and diminishing incomes per capita. (5)

Uganda's third Five-Year Development Plan places strong emphasis upon all aspects of rural development in order to improve standards of living in the rural areas. (6)

The plan emphasises that any improvement in rural living standards will depend heavily on increased agricultural production for many years to come. (7) Although a large increase in production per farmer cannot be expected unless the marketing and other economic and technical constraints which limit production at present are alleviated, social constraints including a lack of knowledge of modern scientific farming methods amongst small cultivators are also undoubtedly important in slowing down the adoption of modern practices. (8)

One of the most difficult and intractable problems faced by the governments of countries like Uganda at present, is this problem of assisting large numbers of small cultivators to modernise their farming systems and increase their production. It seems generally agreed as a result of experience

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that the best way to achieve this objective is by a "package" approach designed to remove the technical and economic bottlenecks which limit production, combined with a concentrated extension programme to assist the cultivators to solve their problems on their own farms. (9) But at the same time, many educators and others have long considered that the formal education system should take its full part in the overall development process, and in view of the importance of increasing agricultural production, this aspect of development cannot be ignored by the schools. (10)

Also, in many countries, serious problems of school-leaver unemployment particularly in cities are arising, (11) and these difficulties are often blamed at least partly upon the schools, although there is considerable controversy as to the extent to which the formal education systems are responsible for these problems, or can hope to alleviate them. / Nevertheless it seems (12) obvious that the schools should do their utmost to educate for self-reliance and for the other qualities which have been so clearly set out by President Nyerere for Tanzania. (13)

EARLY AGRICULTURAL EDUCATION IN SCHOOLS

As in most other tropical African countries, formal education in Uganda was introduced by the Christian missions. Alexander Mackay, who was a pioneer missionary of the Church Missionary Society (C.M.S.), was probably the first to start informal classes in Uganda in his workshop at Mengo in 1882, and Watson points out that it is interesting that he included some simple agricultural instruction right from the beginning. (14) But Hattersley, the missionary who was mainly responsible for starting the widespread C.M.S. elementary school system in Uganda in the early years of the 20th century, seems to have been definitely opposed to the teaching of improved agricultural methods in schools, although he accepted the necessity

of the pupils in boarding schools growing at least some of their own food. He considered that the curriculum should mainly consist of academic subjects. (15) But H. W. Weatherhead and H. M. Grace, successive headmasters of King's College, Budo, Kampala, the well-known C.M.S. High School which had been founded for the sons of chiefs, together with some of the other missionaries and officials of the British administration, considered that a well-rounded education in an agricultural country like Uganda must include some practical subjects, of which agriculture should be one. (16)

In Buganda, food crops were traditionally grown by the women, and men disdained this work. (17) Also some of the chiefs had been to England, and had learned that the curriculum in the best English schools was essentially academic, so they demanded the same standard for their sons. (18) Their attitude was concisely stated by one of the sons of Sir Apolo Kagwa, the great Katikiro, or Prime Minister of Buganda.

"We send our boys to the High School not to learn to drive bullock and to look after cows, but to learn to be fitted for posts of high standing." (19)

The Baganda had strong views on appropriate education for their sons for upward mobility towards posts of high socio-economic status, and since the high schools were entirely dependent on Buganda support for their survival, they were forced to continue the strongly academic tradition started by Hattersley. (20) But for their daughters, who were expected to be the tillers of the soil, the Baganda expected a considerable amount of practical instruction, especially in the school banana gardens. (21)

Many of the other mission boarding schools, both protestant and catholic, in various parts of the country, attempted to give some agricultural instruction at this time, with rather variable

results. (22)

NGORA HIGH SCHOOL

One of these C.M.S. mission schools was Ngora High School in Teso District. W. S. Syson, the headmaster from 1911 - 1916, was a man of outstanding ability as an educator, and he also seems to have had a considerable knowledge of agricultural science. (23) Also the Iteso people, who were comparatively less advanced than the Baganda at this time, seem to have been very willing to allow their sons to learn through an agriculturally based curriculum.

Syson defined the object of the school as,

"not to cram but to train character and develop right thinking" (24)

In pursuing this aim he seems to have developed a well-balanced curriculum in which practical instruction in agricultural skills on the school farm was supported by relevant agricultural examples in the more theoretical subjects; for instance, by studying the world cotton trade in geography. Syson's methodical approach to the teaching of agricultural science was also indicated by his setting one of the first written agricultural examinations recorded in Uganda. (25)

He also seems to have developed a considerable involvement with the local community, which included the repairing of ploughs, rickshaws, carts, and even motorcycles which had been bought by a few of the more prosperous local chiefs. (26)

At about this time the Uganda C.M.S. Board of Education described Ngora as:

"The best of all high schools",

and its Secretary, H.T.C. Weatherhead was moved to

"Plead for an extension of the scientific principles of agriculture as practised there in preference to small cotton and coffee patches cultivated by boys." (27)

Teso District was one of the parts of Uganda where a

very rapid expansion of cotton production was taking place at this time, mainly because of comparatively high prices during and after the first world war.

This expansion was accompanied and assisted by the widespread adoption of Ox-ploughing in the area.

Watson suggests that

"Syson's work at Ngora made a very definite contribution to Teso's startling progress between 1911 and 1924 and to the economic development of the whole Protectorate." (28)

While this statement might be disputed, as the direct contribution of education to economic development is very difficult to determine, there is evidence that some of the ex-students of Ngora High School who later became chiefs, did play a highly significant part in the economic and social development of Teso District. (29)

For instance Watson quotes a missionary visitor to the home of Eria Ochom, the first head boy at Ngora, who later became a chief at Katakwi, as follows:

"To be for a few days his guest, to meet his Christian wife, to be entertained at his own house, to see the roads he had engineered, the cotton he had planted, the church he had built, much more to see his demeanour towards his wife and his people, to worship with him, to talk with him was to feel proud of this product of our school, and keenly thankful that the ideals there engendered had borne such fruit." (30)

THE PHELPS-STOKES COMMISSION AND THE EXPANSION OF AGRICULTURAL EDUCATION

Coming at a time during the aftermath of the first world war when there was an increasing awareness of the necessity of improvements in the education systems of African countries, the Phelps-Stokes Commission Reports did much to convince all concerned of the need to adapt education to local conditions. (31)

In particular, they emphasised agricultural and technical

education. Shortly afterwards, the British Advisory Committee on Education produced their 1925 policy statement, which marked the beginnings of formal government involvement in education in Uganda. (32) One of the results was a marked increase in agricultural education. Initially this mainly consisted of agricultural training for all teachers in primary and subgrade schools, where an agricultural bias was to be imparted to the curriculum. (33)

THE FARM SCHOOLS

As part of an attempt to train young men aged about 15-25 to become progressive farmers, (some married couples were also trained,) government grants were made through the respective Local Education Authorities to establish two Farm Schools in 1934. One under the Verona Fathers' Catholic Mission at Gulu in Acholi District, and the other under the CMS at Namutamba in Buganda.

The training given at these schools was essentially practical. The farms were organized in the form of smallholdings, on which the pupils worked in the mornings, receiving practical instruction in skills such as ox-cultivation, crop and animal husbandry. The students also learned enough about simple carpentry and building to enable them to make some of their own farm equipment, such as ox-carts and harrows, and to build their own simple farm buildings when they were settled on their own land. In the afternoons there were classes, unless there was urgent work to be done on the smallholdings. (34)

Those pupils who completed the course satisfactorily were helped to establish themselves on their own farms. They were given loans ranging from Sh. 100 - 400 to buy equipment and livestock, and to build houses and farm buildings. They were also supposed to receive regular visits, either from their local Agricultural Officer, or from the farm school staff. For instance the Farm Manager of the Gulu school, Brother Fervia, reported that of 12 pupils who completed the course

at his school in 1936, all except one were trying hard to establish themselves as farmers, but that they were encountering considerable difficulties. These included problems of obtaining suitable land, and of buying and training working oxen. (35) Of 14 pupils who left the Namutamba school in 1935, in the following year only 6 were farming their own holdings, 4 had obtained paid employment in agriculture, 2 in other occupations, and the remaining 2 were not yet settled. (36)

It appears that very few of the Namutamba ex-pupils made good as farmers, because their own and their parents' expectations were that they should obtain paid employment. The Gulu school seems to have been rather more successful, perhaps because there were fewer opportunities of paid employment in the North at this time. During 1938, in view of the difficulties which had arisen within the programme of smallholders training, a government committee recommended:

"Shifting the focus of instruction from the training centre to the cultivator's own land." (37)

In 1939 the Superintendent of Agricultural Education, who was Chairman of this committee, commented:

"The principle having been accepted in Uganda that the best place for training farmers is on their own farms, rather than on model holdings at agricultural stations and other centres, the need has arisen for a body of trained demonstrators, who can give this training under the supervision of the Agricultural Officer... Men for this work need character, energy, and skill, and the right type is not too easy to find." (38)

As a result of these decisions and various difficulties the farm schools were closed down in 1940. (39)

POST-WAR DEVELOPMENTS:

THE JUNIOR SECONDARY SCHOOLS

After the war a large expansion in education at all levels took place. Part of this expansion took the form of Junior Secondary Schools. These schools offered a 3-year course to

follow the 6 years of the Primary course. Selection for senior secondary education took place from these schools. (at this time the senior secondary course lasted 3 years).

Since it was realized that a purely academic education was neither in the interests of the country nor in those of the majority of the pupils themselves, many attempts were made to introduce various forms of practical education into the Junior Secondary curriculum, which was still essentially academic. (40)

For instance, one of the most successful schools was the Mill Hill Mission's Mbale College. This school opened in 1952 under the Headmastership of Father Van der Salm, a well-qualified agricultural science teacher. The normal junior secondary syllabus was followed, but agriculture was emphasised throughout the curriculum. Science in particular, and other subjects such as geography were given an agricultural bias, and there was a considerable emphasis on practical work. The school had a well laid-out model farm, on which all the important local crops were grown, and there was a small but well-kept dairy herd, and pig and poultry units. One of the main reasons for the success of this school seems to have been that the pupils were given personal responsibility for small areas of each crop grown on the farm, and for the livestock, under supervision.

This created a much closer personal involvement in the growth and production of crops and livestock than was achieved in those schools where pupils were simply sent to work in the fields. At the same time the strong emphasis on simple scientific studies created a real interest in scientific agriculture among the pupils, without necessarily expecting them to go back into farming.

For instance, several ex-pupils from this school have

given excellent service as agricultural extension workers and farm managers in the government Agricultural Department.

Later, the 3-year Junior Secondary course was combined with the Primary course and reduced, first to 8, and then to 7 years of primary education, followed by 4 years of secondary education. Mbale College then became one of the first schools to develop a Secondary Modern curriculum with an agricultural basis, and finally it became a full secondary school, still including agriculture as one of the subjects for school certificate.

THE RURAL TRADE AND FARM SCHOOLS

As part of the attempt to make provision for those pupils who would not be selected for senior secondary education, a large number of post-primary rural trade schools were established in the years after the war. These schools gave an essentially terminal vocational training lasting one or two years in technical subjects such as carpentry, metal-work, and agriculture, or for girls in homecraft.

The 1957 Annual Report of the Education Department described the curriculum in these schools as follows:

"The maximum of 25% of time in school is spent on classroom instruction in English, arithmetic, drawing, and aspects of crop and animal husbandry or care and use of tools. The curriculum is therefore a practical one, the emphasis in agriculture being on cultivation of a small-holding, together with training in the efficient rearing of poultry, cattle etc. It is envisaged that the majority of people concerned with this work will operate such holdings in their own villages, selling the produce to people in the area." (41)

By 1959, 83 of these schools had been established with 2763 pupils. (42) The 1957 Report had commented that the unprecedented growth of these schools had caused considerable difficulties in producing suitable staff, and that many of

the ex-pupils tended to drift into urban areas. (43)

In fact there seems to have been increasing disillusionment with these schools during the period after about 1960, as parents and pupils realized that the opportunities of employment which they had hoped that these schools would open up, were very limited indeed. Enrolments were often very low, and many of the schools were either closed, or were combined with primary schools in the move to increase the primary course to 8 years. But some of them became complete farm schools, offering a 3-year course after the 8 years (later 7) of primary schooling.

For instance, the Church of Uganda had established a rural trade school on 40 acres of land at Bulindi in Bunyoro to teach small-scale farming and animal husbandry. (44)

Later, additional land was acquired to make a total of 300 acres, and the school was developed into a full farm school. The pupils worked on the farm in the mornings until 11.00 a.m. and then attended classes in various academic and agricultural subjects.

Of 30 pupils who had completed the course by 1962, only about 4 or 5 were reported to be actually farming. (45)

By 1962 8 farm schools had been established, including the Gulu school which was reopened in 1951. One of these schools, Busoga Farm School, was outstandingly successful, and it will be described in more detail later, but the others seem to have encountered continual problems of one sort or another.

The main objective of these schools was always to give their pupils sufficient training in modern agricultural methods so that they would go back to the land as improved farmers; but although very considerable efforts were made, there were continual difficulties in settling the school

leavers on the land. If they returned to their home areas, their relations and neighbours often laughed at them or frowned on them for not obtaining paid employment, which was considered the object of schooling. If they had to work on their father's land, they often found him and his neighbours traditional and suspicious of new methods, so that they either conformed to traditional practices, or left home in disgust to seek a job. If they tried to acquire land of their own, they might find it difficult or impossible to obtain a secure title over the land, because of the traditional communal systems of land tenure in many areas. Therefore they would not consider it worthwhile to make any permanent improvements to the land, in case someone else established a prior claim to it.

BUSOGA FARM SCHOOL

D. J. Wood, a practical farmer and teacher, was recruited in 1958 to start this school on 160 acres of land near Jinja.

The basic aim of the school was defined as follows:

"To train young men and women as persons who can establish and run medium-sized economic and progressive farms in any part of the country. To do this the school must:

- (a) Encourage a real desire among the students to become farmers.
- (b) Develop a real sense of individual and collective responsibility.
- (c) Encourage habits of observation and scientific thought.
- (d) Give a sound general education.
- (e) Combine farm training with craft training." (46)

The curriculum was carefully designed to achieve these objectives, with about half of the instruction time spent in class, and half on practical work. Class work in all subjects was closely related to agriculture. Pupils were also given a variety of responsible tasks to carry out in their own time, including individual crop and livestock responsibilities, and

various carpentry, building, and metal-working projects. Third-year pupils were divided into groups, each of which was responsible for a small farm. Each of the pupils was appointed farm manager in turn, and had to direct the work of the remainder of the group. The school had a large number of voluntary societies which included Dramatics, Choir, Y.M.C.A., Scouts and Pioneer Youth Clubs, which were run so as to develop responsibility as much as possible.

Realizing the need for a formal but practically biased examination at the end of the course, Mr. Wood persuaded the City and Guilds Institute of London to develop new syllabuses and examinations in Tropical Agriculture. Pupils who had completed two years at the school were able to take Tropical Agriculture Stage I in 1966, and Stage II at the end of their third year in 1967. Pupils at all the other Uganda farm schools started taking the City and Guilds Examinations in the following years.

A few of the most promising ex-pupils had been retained on the staff of the school from the earliest days, but in 1963 formal teacher training was started at the school to provide teachers for all the Uganda farm schools.

The curriculum for the student teachers included about six hours a week of education and about six hours of further classroom instruction in agriculture.

In addition each student was allocated to a member of the teaching staff, and assisted him in all aspects of his teaching, and particularly in practical instruction. The course lasted for two years, followed by a two-year probationary period of teaching, and on successful completion student teachers were awarded the Uganda Technical Teaching Certificate.

BUSOGA FARM SCHOOL LEAVERS

A preliminary survey of 333 ex-pupils of Busoga Farm School whose present occupations are known, out of a total of 639 pupils

who left the school since it started in 1958 until the end of 1970, showed the following distribution of occupation. (Since those ex-pupils who are employed are thought to be more likely to have been traced than those who have returned to their home areas, this survey may not represent a random sample of all the school leavers, and therefore the occupations shown may not give a true picture of all the ex-pupils' occupations).

Table 1. Occupations of Busoga Farm School Leavers, 1959-70 (47)

<u>Occupation</u>	<u>Number of ex-pupils</u> <u>%</u>	
Agricultural Department	70	
Veterinary Department	25	
Prisons Department	26	
Other Government Departments	5	
	126	38
Farm Managers	36	
Tea Estate Workers	15	
Sugar Estate Workers	11	
Other Agricultural Schemes	18	
	80	24
Farmers (Own land)	42	
Farmers (Mubuku Irrigation Scheme)	8	
	50	15
Teachers (Mainly Agriculture)	44	13
TOTAL AGRICULTURAL OCCUPATIONS	300	90
Working in Business (Not Agriculture)	11	
Business Men (Own, not Agriculture)	7	
Police and Army	6	
Miscellaneous	5	
Further Education	4	
TOTAL NON-AGRICULTURAL OCCUPATIONS	33	10
GRAND TOTAL	333	100

/farming Table 1 shows that only 50, or 15% of the ex-pupils whose whereabouts are known, are on their own account, and the latest information is that some of those who started farming their own or their fathers' farms are leaving, hoping to obtain paid

employment, due to lack of adequate follow-up or difficulties at home. (48) But a further 80, or 24% are working as farm managers, or in some similar capacity on large farms or estates in the private sector. Another 126, or 38% are working as field assistants, farm managers, tractor drivers, or in similar occupations in the Agricultural, Veterinary or Prisons Departments; and 44, or 13% are employed as teachers of agriculture in primary or secondary schools. So 90% of the known school leavers (300 ex-pupils) are fulfilling very useful practical functions which are making a direct and substantial contribution to nation-building.

It may be interesting to give a few examples of the sort of work some of these school leavers are doing.

One man, who was previously on the staff at the Farm School, is the manager of a large dairy herd of over 100 milking cows belonging to one of the largest Uganda estate companies. This enterprise seems to be giving excellent results under his hard-working and resourceful management.

8 of the ex-pupils are farming on the Mubuku Irrigation Scheme in Toro District. This F.A.O. assisted scheme is laid out as a series of small-holdings with supplementary irrigation. The smallholders are given some advice and assistance in managing their farms and marketing their crops, which include bananas, maize, onions and lucerne. Perhaps partly because these school-leavers are away from their home areas, and the traditional pressures and land tenure problems are therefore absent, they seem to be making good progress, and developing into prosperous yeoman farmers.

Yet another school-leaver is a primary teacher not far from Kampala. He has developed an excellent vegetable garden at the school, and has fenced about an acre of land and paid for ploughing and reseeded it with improved grasses, from

his own pocket. He hopes the school will buy a cow to keep in this field. He has also built a small pig house and loaned a pig to the school. The school also has a flourishing deep litter poultry flock and several rabbits. Although agriculture is only taught as a very limited section of the science syllabus in Uganda primary schools, pupils in this school take a strong interest in the crops and livestock, under the enthusiastic guidance of this teacher. This man has also cleared and fenced about 100 acres of grazing land at his home a few miles from the school, and is building up a herd of Jersey cows. After losing a few cows from tick-borne diseases, he sold 4 more to get money with which he has built an excellent dip with his own hands, to protect his cows from these diseases.

CONCLUSIONS

The main conclusion which must be drawn from the Uganda experience with post-primary farm schools is that, on the whole, they did not achieve their main objective, which was to train young people to return to the land as progressive farmers.

The pre-war experience with farm schools seemed to point quite clearly to this conclusion as these schools were not considered successful, and were closed on the advice of the Committee on Smallholdings and Agricultural Extension in 1939.

It is interesting that even at this early date the Committee stated clearly that the best place for training farmers was on their own farms; this conclusion only seems to have become widely accepted fairly recently, after considerable further trial and error.

The strong aspirations and expectations of Uganda primary and farm school leavers for paid employment seem to be almost identical with those of similar groups in most other African countries as reported by Foster and others. (49)

Therefore Foster argues against widespread specific vocational training in the formal school system (50), and probably this conclusion must be accepted for Uganda, although there may

still be a place for a strictly limited number of schools of the Busoga Farm School type, to give a general education with a vocational bias for specific employment opportunities in the agricultural sector, and possibly for some young people who wish to farm on settlement schemes. Vocational training for other careers connected with the agricultural sectors is probably best provided by government departments, private industry, or other bodies; by developing courses or apprenticeship schemes specifically related to their own needs.

But these conclusions do not solve the problem of the very large number of school leavers, at both primary and secondary level, who are unlikely to be able to obtain regular paid employment. Also because those who obtain paid employment only constitute a small minority of the population, they can only make a marginal contribution to the main task of nation-building. Therefore a major change seems essential in the whole approach to education at both primary and secondary levels. Instead of pursuing academic courses mainly based on rote memorization, aimed towards entrance to the next higher form of education, and finally towards university entrance, which is only attainable by a tiny minority; ways must be found to make schooling far more of an education for life, and for nation-building.

President Nyerere has gone farthest on this course with his "Education for Self-Reliance", (51) and most of his conclusions seem well adapted to his goals of self-reliance and nation-building, provided that they can be put into practice. But his educational policies cannot be considered apart from his overall development philosophy.

Similarly, in Uganda education should be considered as part of the overall policy of nation-building, particularly through rural development. The examples of Ngora High School, Mbale College, and Busoga Farm School have shown what can be achieved, given sustained and determined leadership. Ex-pupils from these schools are playing their full part in nation-building and rural development.

How far can the principles exemplified in these schools be applied throughout the primary and secondary school system?

The main problem here seems to be that of teacher education and supervision. If all those involved in school supervision and teacher education had a clear concept of education for rural development and nation-building, and if strong incentives in terms of selection for higher education were given to those pupils who made progress towards the achievement of these objectives, there seems little doubt that many schools would quickly become oriented towards the objectives. (An example of what one interested and knowledgeable teacher has already done in this direction in an ordinary primary school was given on page 16.)

In order to achieve these objectives it would be necessary to reorient the teacher training colleges at both primary and secondary levels. A major effort would be needed to select and train tutors and especially principals for teacher training colleges who had a real commitment to, and knowledge of rural development and who possessed strong qualities of leadership. Also specialist agricultural tutors should be appointed to all teacher training colleges, and all colleges should possess a well-run model farm.

All student-teachers should participate in a comprehensive rural development course, which would include various projects both on the college farm and among the local rural community. A further effort would be needed to reorient supervisory staff in Ministries of Education on similar lines.

As part of the whole rural development programme, it would be necessary to convince parents that a rurally oriented education was in the best interests of their children. This could probably be done if it could be shown that the schools which made the most progress in this direction also gave the best general education and achieved the best examination results,

but full success would depend on other factors which lie outside the scope of this paper. These would include top level policy decisions determining the relative allocation of national resources to the cities and to the rural areas, the relative income levels of urban and rural workers, and necessary changes in land tenure and other rural structures.(52) Unless farming and related occupations could be shown to be as secure and profitable as white-collar employment in the cities, it is doubtful whether parents' and pupils' aspirations would change very much. If these changes were undertaken, school curriculum alterations to combine educational excellence with a strongly rural and developmental bias would follow naturally, but are probably less important than the general educational environment and philosophy in the schools.

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20. Ibid.p.76.
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